

NASA Earth Science and Applications from Space Strategic Roadmap Committee
(SRM#9) 1st Meeting Background References

The following is a partial list of relevant references organized around topic areas. This list was drawn mainly from the Earth Science and Applications from Space Background Document. In some cases we have included web links to on-line versions of the references. These were valid when the background document was prepared (Oct. 2004).

National Policy Framework:

- U.S. Public Law, “The National Aeronautics and Space Act of 1958,” Public Law number 85-568, as Amended, URL <http://www.hq.nasa.gov/ogc/spaceact.html>
- The White House, National Science and Technology Council “Fact Sheet, National Space Policy,” September 19, 1996, URL <http://www.ostp.gov/NSTC/html/fs/fs-5.html>. The actual policy statement is classified, and only this fact sheet is publicly available.
- White House Fact Sheet, “U.S. Commercial Remote Sensing Space Policy,” May 13, 2003, URL <http://www.whitehouse.gov/news/releases/2003/05/20030513-8.html>
- White House Web Page, “President Bush Announces New Vision for Space Exploration Program,” URL <http://www.whitehouse.gov/infocus/space/index.html>
- Web Page, “National Science and Technology Council,” accessed Oct. 1, 2004, URL <http://ostp.gov/nstc/html/nstc.html>
- “The Report of The Commission to Assess United States National Security Space Management and Organization,” pursuant to Public Law 106-65, the Honorable D. Rumsfeld, chair, January 11, 2001, URL <http://www.defenselink.mil/pubs/space20010111.html>

National and International Coordination of Global Earth Observation Systems:

- Latest version/draft of the GEOSS 10-Year Implementation Plan DRAFT REFERENCE DOCUMENT, available from the Group on Earth Observations web page at URL <http://earthobservations.org/>
- Latest version/draft of the Strategic Plan for the U.S. Integrated Earth Observation System, available from the Interagency Working Group on Earth Observations web page at URL <http://iwgeo.ssc.nasa.gov/>
- Additional Background Documents:
 - United Nations, “Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002,” A/CONF.199/20*, URL <http://ods-dds-ny.un.org/doc/UNDOC/GEN/N02/636/93/PDF/N0263693.pdf>
 - Summit Documents Web Page, “Science and Technology for Sustainable Development - A G8 Action Plan,” URL http://www.g8.fr/evian/english/navigation/2003_g8_summit/summit_documents/science_and_technology_for_sustainable_development_-_a_g8_action_plan.html
 - White House Science and Technology Fact Sheet, “Fact Sheet: Action on Science and Technology,” June 2, 2003, URL <http://www.whitehouse.gov/news/releases/2003/06/20030602-15.html>

NASA Earth Science and Applications from Space Strategic Roadmap Committee
(SRM#9) 1st Meeting Background References

- White House Web Page, “Science and Technology for Sustainable Development: “3r” Action Plan and Progress on Implementation,” June 10, 2004, URL <http://www.whitehouse.gov/news/releases/2004/06/20040610-53.html>
- Web page, “NASA Contributions to GEO and IWGEO,” URL <http://earth.nasa.gov/visions/geoss.html>

NASA’s Transformation -- Key Reports and Planning:

- NASA Strategic Plan
- A Journey to Inspire, Innovate, and Discover, June 2004 (the Aldridge Commission Report).
- The Need to Transform the Structure and Management of NASA, Report of the Roles, Responsibilities And Structures ("Clarity") Team, June 24, 2004.
- A Renewed Commitment to Excellence: An Assessment of the NASA Agency-wide Applicability of the Columbia Accident Investigation Board Report, January 30, 2004 (the Diaz Report).
- The Columbia Accident Investigation Board Report, 2003 (the CAIB report)
- Enhancing Mission Success -- A Framework for the Future, A Report by the NASA Chief Engineer and the NASA Integrated Action Team, January 2001.

NASA Earth Science Planning Activities:

- Earth Science Enterprise Strategy, October 1, 2003.
- NASA, “Earth Science Research Plan,” 1/6/05 DRAFT. This document will be posted on the web. The previous version of this document is:
 - NASA, “Understanding Earth System Change: NASA's Earth Science Enterprise Research Strategy for 2000-2010,” December 2000, available through URL http://www.earth.nasa.gov/visions/researchstrat/Research_Strategy.htm. An update to this document will be publicly available for use by the Strategic Roadmapping Committee.
 - NASA Earth Science Focus Area Roadmaps. Updates to these roadmaps are included in the 1/6/05 DRAFT “Earth Science Research Plan. See URL <http://www.earth.nasa.gov/roadmaps/index.html> for the previous, versions of the roadmaps.
- NASA Report, “Earth Science Vision 2030 Working Group Report,” March 2004, URL http://neptune.gsfc.nasa.gov/vision/Earth_Science_Vision_2030.pdf
- NASA, “Report of the Workshop on NASA Earth Science Enterprise Post-2002 Missions,” March 3, 1999 (possibly less useful source representing earlier community involvement in planning NASA’s future implementation).

NASA Earth Science and Applications Technology:

- Notional Missions Concepts Package developed by the Earth Science Technology Office (ESTO), will be made available on Web site.
- See URL <http://estips.gsfc.nasa.gov/> for access to the Earth Science Technology Integrated Planning System (ESTIPS). For examples of how NASA has engaged the community in developing and maintaining this database, see:

NASA Earth Science and Applications from Space Strategic Roadmap Committee
(SRM#9) 1st Meeting Background References

- “Sensor & Platform Technology Requirements for Implementing NASA’s Earth Science Research Strategy in the Next Decade: A Summary Report Based on the ESTO Technology Planning Workshop Held on March 5-6, 2003,” available on the Web at URL <http://estips.gsfc.nasa.gov/Home/docs/ESTOWorkshop20031.pdf>
- URL <http://www.esto.nasa.gov/conferences/estc2004/> for information about the fourth annual Earth Science Technology Conference. To encourage greater participation, these annual conferences alternate between the East and West coasts.

NASA Earth Science Applications Planning Activities:

- NASA Office of Earth Science, “Earth Science Applications Plan,” July 2004, URL <http://www.earth.nasa.gov/visions/AppPlan.pdf>. The most recent versions of the Applications Roadmaps are on pages 36 to 61.

NRC Decadal Survey:

- Community Inputs to the Decadal Survey

NRC and ESSAAC Advice to NASA and NASA’s Responses:

- Steps to Facilitate Principal Investigator-Led Earth Science Missions (NRC, 2004)
- Assessment of NASA’s Draft Earth Science Enterprise Strategy (NRC, 2003)
- Enhancing NASA’s Contribution to Polar Science (NRC, 2001)
- Review of NASA’s Earth Science Enterprise Research Strategy for 2000-2010 (NRC, 2001)
- Assessment of the Usefulness and Availability of NASA’s Earth and Space Science Mission Data (NRC, 2002)
- Transforming Remote Sensing Data into Information and Applications (NRC, 2001)
- Toward New Partnerships in Remote Sensing (NRC, 2002)
- Using Remote Sensing in State and Local Government (NRC, 2003)
- Review of NASA’s Earth Science Enterprise Applications Program Plan (NRC, 2002)
- The Role of Small Satellites in NASA and NOAA Earth Observation Programs (NRC, 2002)
- Report of the Task Group on Assessment of NASA Plans for Post-2002 Earth Observing Missions (NRC, 1999)
- Utilization of Operational Environmental Satellite Data: Ensuring Readiness for 2010 and Beyond (NRC, 2004)
- Satellite Observations of the Earth’s Environment (NRC, 2003)

NOTE: Some NRC reports relate to other topics (e.g., data policy, applications, weather, natural hazards, climate, or air quality) and are listed elsewhere.

- URL http://www.earth.nasa.gov/visions/ESSAAC_minutes.html for ESSAAC advice.

NASA Earth Science and Applications from Space Strategic Roadmap Committee
(SRM#9) 1st Meeting Background References

- Bretherton, F., chair, “Earth System Science, A Closer View,” Report of the Earth System Sciences Committee, NASA Advisory Council, January 1988 (historical advice that led to EOS, the Earth Observing System).

National Information and Data Policy:

- The Executive Office of the President, Office of Management and Budget, “The President’s Management Agenda,” Fiscal Year 2002, URL <http://www.whitehouse.gov/omb/budget/fy2002/mgmt.pdf>
- □ Web Page, “National Spatial Data Infrastructure, Geospatial One-Stop,” URL <http://www.geo-one-stop.gov/>
- “OMB Circular A-16, Revised,” August 19, 2002, URL http://www.whitehouse.gov/omb/circulars/a016/a016_rev.html
- Down to Earth: Geographic Information for Sustainable Development in Africa (NRC, 2002)
- Review of NASA’s Distributed Active Archive Centers (NRC, 1998)

National and International Weather Research and Applications:

- Terms of Reference for the U.S. Weather Research Program (2001), URL http://box.mmm.ucar.edu/uswrp/program_organization/tor.html
- From Research to Operations in Weather Satellites and Numerical Weather Prediction – Crossing the Valley of Death (NRC, 2000)

National Natural Hazards Research and Applications:

- Web Page, “Subcommittee on Natural Disaster Reduction,” accessed Oct. 1, 2004, URL <http://www.usgs.gov/sndr/>
- Solid Earth Science Working Group, “Living on a Restless Planet,” 2002, available through URL <http://solidearth.jpl.nasa.gov/PAGES/report.html>

National Climate Change Science and Applications:

- Strategic Plan for the US Climate Change Science Program, 2003. For access to the plan and the NRC review, please see the “Strategic Plan for the Climate Change Science Program” web page at URL <http://www.climatescience.gov/Library/stratplan2003/default.htm>
- Web Page, “About the U.S. Climate Change Technology Program,” accessed Oct. 1, 2004, URL <http://www.climatechange.gov/about/index.htm>
- The Science of Regional and Global Change: Putting Knowledge to Work (NRC, 2001)
- Improving the Effectiveness of U.S. Climate Modeling (NRC, 2001)
- Issues in the Integration of Research and Operational Satellite Systems for Climate Research I. Science & Design (NRC, 2000)
- Issues in the Integration of Research and Operational Satellite Systems for Climate Research II. Implementation (NRC, 2000)
- Committee on Global Change Research, “Global Environmental Change: Research Pathways for the Next Decade,” National Academy Press, 1998, available through URL <http://www.nap.edu/catalog/6264.html>. The National Academy sometimes reviews NASA’s Earth system science programs as part of

NASA Earth Science and Applications from Space Strategic Roadmap Committee
(SRM#9) 1st Meeting Background References

larger national efforts. Such was the case with this 1998 “pathways” report, which addressed decadal recommendations for the U.S. Global Change Research Program. This was essentially a decadal assessment of NASA’s research in the context of the larger, national program.

- Our Common Journey (NRC, 1999)
- Ocean Commission Report?

Air Quality Research and Applications:

- Global Air Quality: An Imperative for Long-Term Observational Strategies (NRC, 2001)